BEOMASTER 1001

BANG & OLUFSEN

Congratulations on Your Beomaster 1001

The Beomaster 1001 – a combination stereo amplifier and FM tuner with three pretunable program settings and unconventional design.

The ambiophony facility provides extended stereo reproduction.

The Beomaster 1001 delivers 15 watts r.m.s. per channel or 40 watts total music power. Distortion is less than 0.5 %, and sockets are provided for turntable, tape recorder, headphones and speakers (stereo and ambio).

The Beomaster 1001 has a top-operated black-metal panel with slide-rule dial and metal operating controls. Concealed dials for the pretuned FM stations. May be placed horizontally, sloping, or vertically on a wall.

Even if your Beomaster 1001 is simple to operate in everyday use, we nevertheless advise you to devote a few minutes to a study of these instructions. The numerous control facilities deserve to be understood if you are to realize the full benefit of your Beomaster 1001 and your entire stereo system.

Faithfully Yours,
Bang & Olufsen

What is Ambiophony?

Ambio is an expansion of the type of sound reproduction known today as stereo.

Ambio is reproduced through four loudspeakers – two more than required for stereo.

Ambio is sensed as being more spatial and acoustically more lifelike than conventional stereo. The sound picture has greater depth because you get an added feeling of being present in the concert hall, listening to the actual performance. Ambio is based on the principle that in a concert hall you not only receive sound impressions directly from the performing group, you also get reflections from the wall and ceiling. This spatial sensation is instrumental in providing the auditory experience, and even a two-speaker stereo system will not bring it out fully. And you cannot do the trick by connecting additional speakers to a conventional stereo amplifier as in that case you still have the same left and right front signals except that they are distributed on more speakers.

In the Beomaster 1001 the left and right channels are "subtracted from each other" electronically, and the resulting difference signal contains a certain amount of spatial information which is fed to the two "new side speakers.

Many existing stereo records, and hence also FM stereo broadcasts and tape recordings, contain this spatial effect to a greater or lesser extent. In a concert hall, room acoustics will be recorded together with the actual programme material, appearing as time-delayed signals in both left and right channels. Recordings made in a strongly damped studio contain few time-delayed signals, and the spatial sensation will therefore depend on how the producer mixed the sounds from the various instruments, perhaps adding acoustical effects by electronic means.

Multichannel records, such as SQ records, which are intended for use in a four-channel matrix system in order to bring out all sound effects, can be played successfully through the Beomaster 1001. Reproduction will be more spatial than with a stereo system but will not have all the sound effects that an expensive four-channel sound system can provide.

A conventional good-quality stereo turntable unit will provide ambio reproduction of both stereo and SQ records through your Beomaster 1001.

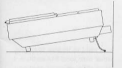
SETTING UP

After having unpacked your Beomaster 1001 you may set it up wherever convenient in your room, together with the other components of your stereo system.

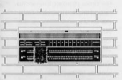
The Beomaster 1001 may be placed in several positions:

Horizontally on a table or shelf.

At an angle, using the two supporting legs mounted beneath the set.



Vertically on a wall, using a type 8802019 wall-mounting bracket (separately available against an additional charge). Instructions for mounting are supplied with the bracket. After the bracket has been screwed into the wall, the set may be hung on it, and the various connector sockets will then face upwards. A screen provided for the purpose will conceal these sockets and their associated leads.



The Beomaster 1001 generates some heat and must be able to get rid of that heat. The ventilation apertures in the bottom and on the top of the cabinet must therefore be accessible for air circulation.

Avoid placing your Beomaster 1001 directly above a radiator, where the temperature is considerably higher than in the rest of the room.

In order to be able to function as an FM radio, the Beomaster 1001 requires the following minimum of connections:

two speakers
an FM aerial
the mains

And to enable utilization of all facilities, the following may also be connected:

a record player
a tape recorder
headphones
two speakers for ambio.

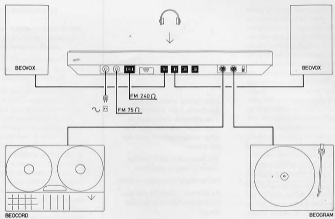
Speakers

The following types may be used as front speakers for stereo reproduction:

Beovox 901
Beovox 1001
Beovox 1702
Beovox 1802
Beovox 2702
Beovox 3702.

All these types are capable of handling the output power which the Beomaster 1001 can deliver, but there are differences in reproduction quality and dimensions.

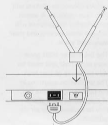
The two speakers plug into the two sockets marked FRONT, the left speaker into L and the right speaker into R.



FM Aerial

If you live near an FM broadcasting station you may use a type 8902010 FM indoor aerial. On the back of the set is a holder into which this aerial may be fitted, and the short cable is plugged into the socket marked 240 - 300 ohms. However, this aerial cannot be used with the type 8902019 wall-mounting bracket because the cover screen prevents the aerial from being extended.

An indoor aerial has its limitations, and if FM reception is not entirely noise-free or if



you want to be able to receive other than local FM stations, a more efficient aerial must be provided or the set may be connected to a communal aerial. FM stereo reception in order to be noise-free requires an incoming signal that is approx. ten times stronger than in the case of mono reception from the same station. Discuss this with your dealer; he knows local conditions and can advise you.

Your Beomaster 1001 has sockets for both 60 - 75 and 240 - 300 ohm aerial systems.

Supply Voltage

Your Beomaster 1001 is switchable between mains voltages of 110, 130, 220 and 240 volts AC, 50 - 60 Hz. The switch is located on the bottom of the set and can be turned with a coin. As supplied to you, the set is switched to 220 volts, and if this is your local mains voltage you may directly plug the mains lead into a wall socket.

If your mains supply is other than 220 V, the switch must be rotated to the correct setting BEFORE connection to the mains.

Turntable Unit

Your Beomaster 1001 is intended for use with a stereo turntable having a low-impedance pickup, such as the Beogram 1001. The DIN plug of the turntable unit goes into the socket marked with the phono symbol. The small switch should be in the L position, low impedance.

You may also operate a turntable having a high-impedance pickup with your Beomaster 1001, in which case the switch should be set to H, high impedance.

Tape Recorder

The TAPE socket is intended for connection of a tape recorder through a type 0661014 cable. This connection enables you both to record and play back tapes. It is unimportant whether the tape recorder is a mono or stereo model, whether it has an output amplifier, single reels (reel-to-reel) or a tape cassette. The only requirement is that it has a DIN standardized radio socket.

Headphones

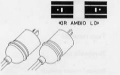
A pair of headphones may be plugged into the HEADPHONES socket, located just beneath the front edge of the Beomaster 1001. Headphone impedance should be at least 100 ohms.

NOTE: It is possible to connect headphones of lower impedance than 100 ohms as the plugs are identical. However, you are warned not to do this as you will get louder volume, with consequent greater risk of ear damage and overloading the headphones.

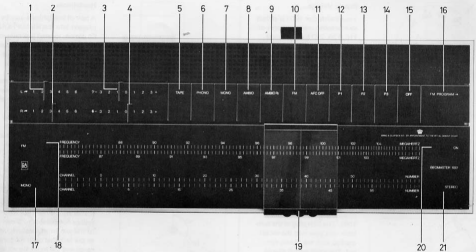
Speakers for Ambio

The two side speakers for the spatial signals need not have ratings comparable to those of the two front speakers, due to the fact that both the tonal range and the input signals are smaller.

The ambio speakers should be placed on their respective side walls, slightly to the rear in relation to the listening area. The sketch shows their placement with respect to the two front speakers for stereo reproduction.



The leads from the two side speakers plug into the sockets marked AMBIO, the left speaker into L and the right one into R.



PLAN VIEW

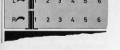
1	L	Volume control, left channel	
2	R	Volume control, right channel	
3		Bass control	
4		Treble control	
5	TAPE	Tape recorder	
6	PHONO	Turntable unit	
7	MONO	Stereo/mono switch	
8	AMBIO	Ambio speakers	
9	AMBIO	Ambio filter	
10	FM	Dial	
11	AFC OFF	FM automatic frequency control	
12	P 1	Pretuned FM program 1	
13	P 2	Pretuned FM program 2	
14	P 3	Pretuned FM program 3	
15	OFF	Off switch	
16	FM PROGRAM	Pretuning of FM programs	
17	MONO	Mono indicator light	
18	FM	Tuning indicator light	
19		Cursor	
20	ON	"Power on" indicator light	
21	STEREO	Stereo indicator light	

OPERATION

Your Beomaster 1001 is switched off when the OFF pushbutton is depressed.
To switch on, depress one of the buttons marked FM, P 1, P 2, P 3, PHONO or TAPE, and the ON indicator will light up.

Speakers or Headphones

The two front speakers will reproduce both mono and stereo as long as no headphones are connected. When a headphone plug is inserted, the two front speakers will switch off automatically.



Volume

The two slide knobs L and R controls the volume level of the left and right channels, respectively, for FM, records and tapes.

Balance

The two volume controls should usually be operated together, but you are also able to set them individually and so alter the balance between the two sound channels. This may be necessary if the two front speakers cannot be placed quite symmetrically in your room. Listen to a mono program from the place in the room you want to regard as your listening area. Adjust the two slide knobs until you feel the sound to be coming from a point midway between the two speakers.

Deep Notes

This slide knob controls the deep notes relative to the mid-range and high notes. The mid-scale setting, 0, may be regarded as the normal setting. Sliding the knob towards the right will accentuate the deep notes whilst moving the knob towards the left will attenuate them.

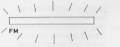
High Notes

This slide knob controls the high notes relative to the deep and mid-range notes. The normal setting is in the middle, at 0; towards the right the high notes are accentuated; moving the knob towards the left will attenuate them.

FM Stations

Depress the FM button and set the tuning cursor to the station of your choice. The dial is calibrated both in MHz, 87.5 - 104, and in channel numbers, 0 - 56. The cursor has three thumb wheels for vernier adjustment, enabling you to tune stations in "spot-on".

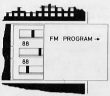
The FM indicator light shows maximum brightness when an FM station is tuned in correctly.



AFC (Automatic Frequency Control)

Your Beomaster 1001 has an FM automatic frequency control circuit which can perform final, accurate tuning and ensure that the station stays locked on tune. This circuit can be bypassed by depressing the AFC OFF button. To release the button, press it again.

When listening to a weak FM station adjacent to a stronger one on the dial you may find it an advantage not to use the AFC feature – that is, operating your set with the AFC OFF button depressed.



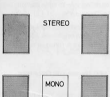
Pretuned FM Programs

Buttons P 1 to P 3 permit you to choose instantly between your favourite FM programs. First you must preset the three small dials which are concealed under a sliding panel during everyday operation.

Example: With Pushbuttons P 1 and AFC OFF depressed, set dial knob 1 to the FM station broadcasting Program 1. Use the FM indicator light as during tuning on the large FM dial.

Similarly set knobs P 2 and P 3 to the other programs.

When you have completed setting the small dial knobs, replace the sliding panel and release the AFC OFF button.

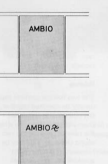


FM Stereo

When the station you have tuned in is transmitting a stereo program, this will be indicated by the STEREO indicator light, and the program will automatically be reproduced as stereo.

With the MONO button depressed you will get single-channel reproduction because the two channels are put together, and the MONO indicator will light up.

The STEREO indicator will show light as long as an FM stereo program is being received.



Playing Records

Depress the PHONO button and operate the volume, balance and tone controls as for FM radio reception.

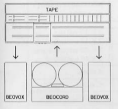
With the MONO button depressed, the left and right channels of a stereo record will be added together for mono reproduction, and the MONO indicator will show light.

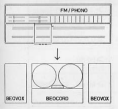
Ambio

Ambio reproduction, as stated on page 5, requires the connection and use of four speakers.

The two side speakers are cut in by depressing the AMBIO button. You will then obtain extended stereo reproduction of an FM stereo program, stereo record or stereo tape recording. The ambio effect will depend on the conditions under which the music is broadcast or was recorded. "Live" recordings – that is, in a concert hall with an audience present – will produce most ambio effect.

The ambio filter button when depressed will attenuate the high notes, but only for the two side speakers.
This attenuation may be desirable, especially for classical music from a concert hall or if your room has pronounced resonance effects.
The two side speakers may be left out in while you listen to mono programs but will produce no sound.





Tape Playback

To play back previously recorded tapes, depress the TAPE button and set the tape recorder to playback.
Operate the volume, tone and balance controls as for radio reception. Depressing the MONO button will cause the left and right channels of a stereo recording to be put together for mono reproduction, and the MONO indicator will show light.

Making Tape Recordings

Tune or switch your Beomaster 1001 to the program or source you want to record on tape. Otherwise operate the controls as if you just want to listen to the program in question.
Do not depress the TAPE button. Switch your recorder to the record function. The Beomaster volume, tone and balance controls will have no effect on the recording. Depressing the MONO button will cause a stereo program to be recorded as mono on the tape.

MAINTENANCE

The external surfaces of your Beomaster 1001 can normally be kept clean with a dry cloth. Any grease spots can be removed with a soft cloth moistened with a solution of detergent in cold or lukewarm water, followed by thorough drying with a dry cloth.

Black Panel and Lacquered Wooden Frame

Use a soft cloth moistened with a solution of detergent in lukewarm water. Use of alcohol is inadvisable as this may cause damage to the transparent portion of the cursor.

Rosewood

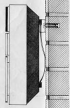
If the cabinet surfaces seem grey and dry, you may apply a thin film of teak or rosewood oil though not more than once or twice a year. Use a thin grade of oil and wipe the surface with a dry cloth when the oil has penetrated into the wood.

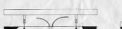
TECHNICAL DATA — **Subject to change without notice**

Amplifier	Measured with bass and treble set for linear response		DIN 45 500 Requirements, page 6, ampl.	BEOMASTER 1001 type 2504
Power Output	1000 Hz, at specified distortion (see Harmonic Distortion	RMS	2 X 6 watts	2 X 15 watts/4 ohms 2 X 13 watts/8 ohms
		Music	None	2 X 20 watts/4 ohms 2 X 15 watts/8 ohms
Speaker Impedance	Nominal		4 or 8 ohms	4 ohms
Harmonic Distortion	DIN 45 500 at 50 mW output 1000 Hz			< 0.3 %
	DIN 45 500 at rated output 1000 Hz		≦ 1 %	< 0.5 %
Intermodulation	DIN 45 500, page 6		≦ 3 %	< 1.0 %
Frequency Response	DIN 45 500, 1.5 dB		40 - 16,000 Hz	20 - 35,000 Hz
Power Bandwidth	DIN 45 500, 1 % distortion		40 - 12,500 Hz	20 - 20,000 Hz
Damping Factor	DIN 45 500, 1000 Hz		≧ 3	> 11
Inputs	Sensitivity at specified output, 1000 Hz	Pickup low impedance. Tape recorder	≦ 5 mV/ ≧ 47 kohm ≦ 500 mV/ ≧ 470 kohm	3.5 mV/47 kohm 200 mV/470 kohm
Signal-to-noise ratio	DIN 45 500 50 mW output	Pickup low impedance Load impedance 1.2 kohm Tape recorder Load impedance 4.7 kohm	≧ 50 dB	> 50 dB > 60 dB
	At specified output, linear measurement	Pickup low impedance Load impedance 1.2 kohm Tape recorder Load impedance 4.7 kohm	None	> 55 dB > 65 dB
Channel Separation	DIN 45 500 Between channels all inputs Load impedance: Pickup, low impedance 1.2 kohm, other inputs 4.7 kohm	1000 Hz and 250 - 10,000 Hz	≧ 40 dB ≧ 30 dB	> 50 dB > 40 dB
	DIN 45 500 Between inputs, load impedance: Pickup, low impedance 1.2 kohm, other inputs 4.7 kohm	1000 Hz and 250 - 10,000 Hz	≧ 50 dB ≧ 40 dB	> 65 dB > 55 dB
Outputs	DIN 45 500 Signal voltage at specified input voltage, 1000 Hz	Tape recorder	0.1 - 2 mV per 1 kohm load impedance (1 - 50 kohm)	40 mV at 80 kohm output impedance
Bass Control	Measured at 40 Hz		None	± 17 dB
Treble Control	Measured at 12,500 Hz		None	± 14 dB

FM Tuner	Measured at 94 MHz, modulation, 1000 Hz	DIN 45 500 Requirements, page 2, FM Tuners	BEOMASTER 1001 type 2504
Range		None	87.5 - 104 MHz
Sensitivity	26 dB signal-to-noise ratio deviation 40 kHz IEC filter curve 123/A	None	< 1.8 µV at 75 ohms
	30 dB signal-to-noise ratio IHF	None	< 3.5 µV at 75 ohms
Limiting	– 3 dB, deviation 40 kHz	None	< 2.2 µV at 75 ohms
Signal-to-noise Ratio	DIN 45 500, page 2	≧ 54 dB	> 65 dB
Selectivity	IHF ± 400 kHz		> 20 dB
Frequency Range	DIN 45 500 ± 1.5 dB, pre-emphasis 50 µS	50 - 6,500 Hz	40 - 15,000 Hz
Harmonic Distortion	DIN 45 500	≦ 2 %	< 0,9 %
Stereo Channel Separation	DIN 45 500, page 2, measured at 1000 Hz Deviation 40 kHz	≧ 26 dB	> 30 dB
Pilot and Carrier Suppression	DIN 45 500, page 2 19 kHz 38 kHz	≧ 20 dB ≧ 30 dB	> 35 dB > 35 dB

Other Data			
Power Supply	AC Frequency Power consumption		110 - 130 - 220 - 240 V 50 - 60 Hz 15 - 120 watts
Dimensions	H X W X D		7.8 X 54.5 X 20.5 cm
Weight			6 kg





BEOMASTER 1001 og 1200 kan placeres lodret på en vægflade med dette vægbeslag, der består af en holder samt en skærm, der dækker ledningsføringen til stikdåserne. Selve holderen fastgøres solidt på væggen ved hjælp af de medfølgende skruer og rawlplugs, som vist fig. 1

Ophængningen af BEOMASTER'en sker i de frie ben i bunden, i dennes udskæring.
Først holdes modtageren skråt, at holderens to faste ben går ind i udskæringerne på de nederste ben, fig. 2.

Derefter løftes modtageren ind over selve holderen, så udskæringerne på de øverste ben kommer på plads som vist fig. 3.

Ledninger og stik kan nu stuves til, og skærmen sættes på plads. De to bøjler med udsparinger føres ned om de to styrestopper på den faste holder som vist fig. 4 og 5.

The BEOMASTER 1001 and 1200 can be installed vertically on the wall with the aid of this wall mounting, which consists of a holder and a cover concealing the cables that run to the plug.
The mounting is fixed securely on the wall by means of the accompanying screws and wallplugs (Fig. 1).

The BEOMASTER is installed by fitting the mounting into the recesses in the feet underneath the set.
Hold the set in such a manner that the two springs of the mounting fit into the recesses in the lower two feet (Fig. 2).

The set is then lifted over the mounting so that the recesses in the upper two feet click into position (Fig. 3).

The cables and plug can now be connected, and the cover fitted in position. The two slotted brackets are then slid onto the two guiding pins on the main mounting (Figs. 4 and 5).

Der BEOMASTER 1001 und 1200 lassen sich senkrecht an der Wand anbringen, und zwar mit Hilfe dieses Wandbeschlags, der aus einem Halter sowie einer Abdeckmung für die zu den Steckdosen führenden Leitungen besteht.
Den Halter mit Hilfe der mitgelieferten Schrauben und Dübel sorgfältig an der Wand befestigen, s. Abb. 1.

Den BEOMASTER mit den vier am Boden befindlichen und mit Ausfräsungen versehenen Füßen einhängen. Hierbei zuerst den Empfänger so halten, daß die beiden Federn des Halters in die Ausfräsungen an den unteren Füßen einrasten können, s. Abb. 2.

Dann den Empfänger anheben und so über den Halter einschieben, daß die Ausfräsungen der oberen Füße einrasten, s. Abb. 3.

Leitungen und Stecker anschließen und die Abschirmung anbringen, und zwar die beiden mit Ausfräsungen versehenen Bügel in die beiden Führungszapfen des an der Wand befestigten Halters einschieben, s. Abb. 4 und 5.

VÆGBESLAG, type 8902019 og 8920243, for BEOMASTER 1001 og 1200

WALL MOUNTING, type 8902019 and 8920243, for BEOMASTER 1001 and 1200

WANDBESCHLAG, TYP 8902019 und 8920243, für BEOMASTER 1001 und 1200

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